

REMARKS

Claims 78-79, 82-87, and 90-91 are canceled without prejudice or disclaimer and claims 97-111 are newly added. Therefore, claims 71-77, 80-81, 88-89, and 92-111 are pending in the application. Claim 77 is amended to now be a dependent claim, without substantive change. Claim 89 is amended to combine the limitations of claims 89-90, without substantive change. Claims 81, 92, and 94 are amended to comply with the Examiner's §112, ¶1 requirement. Such claim amendments are non-narrowing and do not create any estoppel. Claims 88 and 95 are amended in response to the Examiner's §112, ¶1 requirement, to more clearly define the claimed invention, as agreed-to in the November 24, 2008 telephone interview. Applicant thanks the Examiner for granting the interview. A Request for Extension of Time, and fee, are concurrently submitted.

Consideration and allowance of all claims are respectfully requested in view of the following remarks.

No New Matter

- Claim 81 stands rejected under 35 U.S.C. § 112, first paragraph, as being new matter. Applicant respectfully submits that this rejection has been withdrawn.

- Claims 88-95 stand rejected under 35 U.S.C. § 112, first paragraph, as being new matter. Applicant respectfully submits that this rejection is rendered moot by the present claim amendments. However, Applicant notes that the original disclosure supports an airflow-preventing enclosure (e.g., enclosures 10, 31), for example when a user causes an overlap of openings 47, 52 to be zero by rotating a cylinder of the enclosure. Applicant also notes that a single overlap of cylinder openings may effect a single opening in enclosure 31, substantially preventing air from flowing 'through' the enclosure. In that regard, claims 88 and 95 have been amended to more clearly show this structure. Applicant notes that Figs. 2 and 5A show a

preferred embodiment where a single overlap is formed with a small dimension, much less than one radian when a cylinder is rotated to obtain a maximum overlap.

- Claims 91-92 stand rejected under 35 U.S.C. § 112, first paragraph, as being new matter. Applicant respectfully submits that this rejection is rendered moot by the present claim amendments.
- Claim 93 stands rejected under 35 U.S.C. § 112, first paragraph, as being new matter. Applicant respectfully submits that this rejection has been withdrawn.
- Claim 94 stands rejected under 35 U.S.C. § 112, first paragraph, as being new matter. Applicant respectfully submit that this rejection is rendered moot by the present claim amendments.

Nonobviousness

The claimed structure allows a user to manually adjust the ozone level with a simple cylindrical rotation, and such is not taught or suggested in the prior art, applied or otherwise. For example, when the claimed structure is placed in position in the ductwork of a forced-air type HVAC system, a user can simply rotate a knob external to the ductwork, to thereby rotatably adjust a cylindrical window overlap inside the ductwork, permitting an adjustable amount of ozone-producing radiation to exit the cylindrical UV lamp enclosure inside the ductwork. Prior art devices are either required to be disassembled by a mechanic for adjustment, or they are complex. None of the prior art ozone type air purifiers are adjustable and have a simple structure. None of the prior art, applied or otherwise, allows such user adjustment of ozone levels in a room.

- Claims 71, 74, 77, 80-83, 85, 88, 93-94, and 96 stand rejected under 35 U.S.C. § 103(a), as being obvious over *Botcharoff* (U.S. Patent No. 3,905,920) in view of *Meek* (U.S. Patent No.

2,738,225), further in view of *McMillan, Jr.* (U.S. Patent No. 3,752,748), and still further in view of *Hayes* (U.S. Patent No. 3,668,990). Applicant respectfully traverses this rejection.

I No Teaching, Suggestion or Motivation

Applicant respectfully submits that there would have been no motivation to have combined the references as proposed by the Examiner because the applied references teach away from the respective claimed combination(s).

TSM

The obviousness determination is based on Graham v. John Deere Co., 383 U.S. 1 (1966) as further defined by KSR Int'l Co. v. Teleflex Inc., 550 U.S. ___, 127 S.Ct. 1727 (2007). The KSR Court overruled the then-existing Federal Circuit precedent of strict and rigid application of the teaching, suggestion, or motivation (TSM) test to the obviousness analysis (“[requiring] the prior art references [to address] the precise problem that the patentee was trying to solve”).

The TSM test prevents hindsight analysis. TSM remains good law (“This court has already said that the teaching, suggestion, motivation test remains good law for obviousness, only a rigid application of that test is problematic.” Black & Decker, Inc. and Black & Decker (U.S.), Inc. v. Robert Bosch Tool Corp., unpublished (Fed. Cir. 2008)). The KSR Court referred approvingly to Dystar Textilfarben GmbH & Co. v. C.H. Patrick Co., wherein the federal circuit had previously noted: “Our suggestion test is in actuality quite flexible and not only permits, but requires, consideration of common knowledge and common sense.” 464 F.3d 1356, 1367 (Fed. Cir. 2006).

There would have been no motivation to have modified the *Botcharoff* structure as proposed by the Examiner, since such would render the *Botcharoff* device inoperable, or unsatisfactory, for its intended principle of operation, and would change the principle of operation. Specifically, the *Botcharoff* structure is intended to operate in a manner where (1) it has a high ozone generation efficiency (e.g., col. 1: lines 41-43; col. 3: lines 11-15, 31-34; col. 4: lines 9-13; col. 5: lines 9-12), (2) ozone generation at the surfaces of a discharge tube diffuses

freely into the ambient atmosphere (e.g., col. 2: line 67 to col. 3: line 2), (3) it requires the combination of high ozone production efficiency and reduced space and weight (e.g., col. 1: lines 3-12, 42-43; col. 3: lines 12-16, 21-22, 31-34; col. 4: lines 10-12; col. 5: lines 7-12) so that it may be provided in the size and shape of a cigar lighter removeable from a motor vehicle (e.g., col. 1: lines 8-12, 44-63; col. 2: lines 13-15; 33-35), (4) ozone is produced by ionization, and (5) a top of the discharge lamp is exposed by protruding beyond the cap to indicate its operative state (e.g., col. 3: lines 5-7).

(1) By comparison, the claimed structure requires not only that a UV lamp be disposed within first and second cylinders, but also that rotation of the second cylinder change an amount of window overlap, adjusting an amount of ozone-producing radiation being emitted. Such an ozone-producing structure is inherently inefficient as indicated, for example, in Applicant's specification (e.g., ¶0068). The *Botcharoff* device that has an express principle of operation of maximizing ozone-production efficiency therefore teaches away from what is claimed in Applicant's claims 71, 77, 82, and 88. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). In our case, the proposed combination would change the principle of maximizing ozone generation efficiency of *Botcharoff*.

(2) By further comparison, the claimed structure mechanically adjusts an amount of ozone-producing radiation being emitted from the two cylinders and thereby separates a process of generating UV radiation from a subsequent use of that UV radiation for producing ozone (e.g., Applicant's ¶¶0013, 0040). Ozone is thereby produced *only after* the ozone-producing radiation exits the claimed enclosure (emphasis added), whereas in the *Botcharoff* device, "molecules of ozone form around the outer surface of the tube 14"; the ozone of the *Botcharoff* device is thereby produced adjacent discharge tube 14 and within cap 12 (e.g., col. 2: line 67 to col. 3: line 2). Such *Botcharoff* principle of operation of forming ozone along the surface of a tube would be

rendered unsatisfactory by the Examiner's proposed modification/combination. If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). *Botcharoff* therefore teaches away from what is claimed in the subject claims.

(3) In addition, the *Botcharoff* device would be rendered unsatisfactory for its intended purpose of "generat[ing] ozone by ionization which does not take up much room and has a satisfactory efficiency" (i.e., col. 1: lines 41-44). The *Botcharoff* device uses an electric discharge type lamp, such type of lamp being "considerably more efficient than UV systems and results in low power consumption [], lower heat generation, lower operating costs and lower replacement costs. The [electric supply] circuitry [] eliminates voltage spikes, caused by starters and ballasts within a UV ozone product." (See, e.g., DEL Ozone lamp, <<http://www.inyopools.com/Products/01600003039824.htm> >). *Botcharoff* therefore teaches away from the claimed use of "a UV lamp that generates ozone-producing radiation" because such is admittedly inefficient and requires a ballast, making it unsatisfactory for *Botcharoff* intended purposes by being big, inefficient, and heavy. In re Gordon, *supra*.

(4) Another teaching away of *Botcharoff* is the *Botcharoff* requirement of ionization (i.e., col. 1: line 42). It is generally not feasible to form oxygen ions with a UV lamp because: the quartz windows of an ozone-generating UV lamp will only produce light of wavelength 160 nm or more; oxygen will only ionize efficiently in UV light of wavelength 130 nm or less; the oxygen reaction that you can drive with a UV lamp involves neutral atomic oxygen, which can be generated by photodissociation with light of 210 nm or less; the easier and more usual way to generate oxygen ions is in an electrical discharge; by comparison, the UV reaction that forms ozone does not involve oxygen ions - rather, ozone is formed by $O + O_2 + \text{inert third molecule} \rightarrow O_3 + \text{third molecule}$ [as indicated in Applicant's Published Application at ¶0005]. See, e.g., <<http://www.ionizationx.com/index.php?topic=642.msg5825;topicseen>>. Therefore, an

ordinarily skilled artisan would not have considered modifying *Botcharoff* because the claimed UV lamp would render the *Botcharoff* device unsatisfactory for its intended purpose of utilizing ionization. Therefore, *Botcharoff* teaches away from what is claimed in the subject claims. In re Gordon, supra. The proposed modification would also change the principle of operation of the prior art invention being modified. In re Ratti, supra.

(5) Still further, the *Botcharoff* device would be rendered unsatisfactory for its intended purpose of indicating its operative state by protruding a top of the discharge lamp so that it is exposed beyond the cap, if it were modified according to the structure of subject claims 85 and 88. Therefore, *Botcharoff* teaches away from what is claimed in these subject claims. In re Gordon, supra.

- “Common sense” does not cure the above-noted deficiencies of the primary reference, *Botcharoff*. Specifically, the sharp differences between the *Botcharoff* reference and the claimed structure suggest that a prima facie case has not been shown, and there is no evidence that artisans of ordinary skill in the air purification field of art would have known to disregard these many sharp differences. The Examiner’s statement of alleged motivation is therefore inapposite.

II Findings of Fact - *Botcharoff* reference

► The present rejection (i.e., Action, at No. 11) states that *Botcharoff*, at reference No. 14 and Figs. 1 and 4, discloses “a UV lamp.” Applicant respectfully disagrees because reference No. 14 identifies a gas discharge tube (e.g., col. 2: line 20), Fig. 1 illustrates a gas discharge tube 14, and Fig. 4 does not show a lamp or, if it does, it is a discharge type tube or a neon or argon lamp (e.g., col. 5: lines 16, 22-25).

► The present rejection (i.e., Action, at No. 11) states that *Botcharoff*, at Fig. 4, discloses “an airflow-preventing enclosure.” Applicant respectfully disagrees because Fig. 4 therein shows tube 14 extending through the top of cap 12 and through ring 40, and also shows

perforations 42 formed in cap 12 for the express purpose of exposing the tube 14 to the ambient atmosphere. See, e.g., (col. 2: line 67 to col. 3: line 2).

III Findings of Fact - *McMillan, Jr.* reference

Applicant respectfully disagrees with the following Findings of Fact in the ground of rejection (OA at ¶11).

► Regarding the claimed “second cylinder having a second cylinder sidewall, having a second window in the second cylinder sidewall, and being rotatably disposed about the longitudinal axis . . . where rotation of the second cylinder changes an amount of overlap of the first and second windows, the changing of the amount of window overlap thereby adjusting an amount of ozone-producing radiation being emitted through the overlap,” the Examiner, referencing *McMillan, Jr.*, states,

(1) “adjustment member (66a) is capable of rotating the cylinder [63].” Applicant respectfully disagrees because reference number 66a is a clasp or hook member formed on a sleeve 66 at the end 63a of inner telescoping sleeve 63, and clasp 66a is pulled linearly by a cord 68 [and cannot be rotated] (e.g., col. 5: lines 58-61; col. 6: lines 5-20; Figs. 2, 5).

(2) “adjustment member (66a) - in the form of a knob/handle” Applicant respectfully disagrees because 66a is a clasp and is not a knob or handle capable of rotating a second cylinder that has a window, as claimed. As shown therein (e.g., Fig. 2), it cannot be rotated.

(3) “airflow-preventing enclosure.” Applicant respectfully disagrees because the claimed “airflow-preventing enclosure” is defined in the claims to include a specific structure (not just a phrase taken out of the claimed structure), and *McMillan, Jr.*, as detailed in the previous Response to the Action of July 25, 2007 (e.g., “Applicant notes that the telescoping sections 61-63 of *McMillan* do not have openings or windows and do not rotate.”) teaches away from such claimed structure with its linear extension and retraction of the telescoping tube assembly T.

IV Secondary References Inappropriate

Applicant respectfully submits (1) that *Meek* is non-analogous art; alternatively, (2) that *Meek* teaches away from the Examiner's proposed combination; and alternatively, (3) that the Findings of Fact in the ground of rejection are unsupported. Applicant also submits that (4) the *McMillan* and *Hayes* references also teach away from what is claimed.

(1) Nonanalogous Art

A 103 "reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446 (Fed. Cir. 1992). *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992)("[T]he purposes of both the invention and the prior art are important in determining whether the reference is reasonably pertinent to the problem the invention attempts to solve."). The 'reasonably pertinent' determination considers not only whether the devices have "the same function and structure," *In re Deminski*, 796 F.2d 436 (Fed. Cir. 1986), but also whether the hypothetical artisan would reasonably have been expected or motivated to look to the other art. *In re Oetiker, supra*, at 1447(the court rejected the contention that all hooking problems are analogous). See also The law defines the hypothetical artisan as one having ordinary skill in the art to which [the] subject matter pertains. 35 U.S.C. §103(a). "[A]n inventor could not possibly be aware of every teaching in every art." *In re Wood*, 599 F.2d 1032, 1036 (C.C.P.A. 1979).

Meek states that the field of his invention "relates to diffuser devices of the type adapted for introducing volatilizable material into the air. . . [and c]ounteraction of odors and [] other treatments of air involving the addition of volatilizable materials to the air" (i.e., col. 1: lines 15-16, 21-23). Such is outside the present invention's field of photochemical processes and air purifiers/methods that utilize UV radiation. (i.e., Applicant's published application, at ¶0002).

The "reasonably pertinent" prong is not met because *Meek* does not deal with a matter that "logically would have commended itself to an inventor's attention in considering his problem," *In re Clay, supra*, such as by being in "a field analogous thereto." *Cable Elec. Prods.,*

Inc. v. Genmark, Inc., 770 F.2d 1015, 1025 (Fed. Cir. 1985). Specifically, one seeking to adjust a level of ozone generation for purifying air and, at the same time, seeking to effectively separate a process of generating UV radiation from a subsequent use of that radiation for producing ozone (e.g., Applicant's Objects of the Invention) would not have turned to the 'diffusion of volatilizable material' art. See, e.g., Appln. of Van Wanderham, 378 F. 2d 981, 986, 988 (C.C.P.A. 1967).

Analogy may be determined by considering the necessary essential function or utility of the subject matter covered by the claims. See, e.g., MPEP § 904.01(c). In our case, an essential function relates to the adjustment of a photochemical process by the attenuation of a radiation used for a subsequent photochemical process, with a structure that effectively separates a process of generating UV radiation from this subsequent use of that radiation for producing ozone. By comparison, the essential *Meek* function adjusts airflow in a diffusion process (e.g., col. 1: line 71 to col. 2: line 3). Applicant notes that a "diffuser" is defined as "a chamber or duct in which a fast-moving low pressure stream of fluid is transformed into a slow-moving high pressure stream." (Dictionary of Science and Technology, Academic Press, San Diego 1992). Since the *Meek* reference is essentially concerned with adjustment of airflow into a container for the purpose of adjustably mixing air with solid perfume material ('airflow regulator') and, by comparison, the present invention seeks to separate an adjustment of radiation from the subsequent use of that radiation in a separate airflow passageway used for creating ozone, for example by preventing air from entering an enclosure (e.g., Applicant's Published Appln. at ¶0040), *Meek* is unrelated to any particular problem addressed by the subject invention. Therefore, for at least the above reasons, *Meek* is nonanalogous art.

(2) Teaching Away

Meek discloses means for adjustably discharging volatilizable materials - a sleeve member movable with respect to the container part and having apertures therein adapted to register with the apertures of the container part (e.g., col. 1: lines 40-44). The container 10 has apertures 11 in its side walls 12 through which air is adapted to pass for contacting solidified air

treating material within the container (e.g., col. 1: line 72 to col. 2: line 3). The *Meek* invention thereby improved over conventional ‘air-wick’ type dispensers (e.g., col. 1: lines 29-32).

The proposed modification would render the *Meek* device unsatisfactory for its intended purpose of ‘wicking’ room deodorizer with an air flow and diffusing the resulting vapor (e.g., *Meek* at col. 5: line 13, “vapor diffuser”) with an adjustable diffuser, so there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). For example, isolating the interior portion of the *Meek* container 10 from the surrounding airflow would render the *Meek* device inoperable, and a photochemical ozone reaction that removes contaminants would also render the *Meek* device inoperable. Therefore, there would have been no reasons that one of ordinary skill in the field of photochemical processes and UV radiation type air purification would combine *Botcharoff* with *Meek* in a manner that would render the claimed invention obvious.

(3) Findings of Fact - *Meek* reference

A “diffuser” as used in *Meek* diffuses air, and is known as something that spreads, mixes or distributes air evenly. A common light diffuser similarly distributes light evenly, softening and spreading the light over a greater area (e.g., http://encarta.msn.com/dictionary_1861604634/diffuser.html >). However, the present invention is not concerned with diffusion, or softening/distributing light evenly.

► The present rejection (i.e., Action, at No. 11) states, “[i]t was well known in the art (of enclosure and emitting a material to an environment from within the enclosure art) at the time of the invention to provide [the claimed cylinders] to controlling an emission. *Meek* (‘225) discloses an enclosure for emitting a material into the environment . . . it would have been obvious . . . to provide [the claimed structure] . . . in the purifier of *Botcharoff* as modified by *McMillan* to additionally cover the exposed portions of lamp in order to further control the level of ozone formed in the gas by limiting the surface area of the lamp/object exposed to the gas as exemplified by *Meek*.”

The *Meek* device is similar to the *Bulsink* device in that they each have ventilating openings that move air flow directly along a wick, allowing evaporation when the wick is exposed with an air flow that facilitates the evaporation, whereas the present invention effectively separates a process of generating UV radiation from a subsequent use of that UV radiation for producing ozone. *Meek* thereby teaches away.

Applicant respectfully submits that a “diffuser” the *Meek* vapor diffuser that adjusts air flow to thereby adjust introduction of ‘perfumed vapor’ into the environment is not related to what is claimed because the Examiner has not shown that diffusion or the introduction of a solid volatilizable material by adjusting an airflow are related to what is claimed. For example, *Meek* does not limit the surface area of the ‘wick’ being “exposed to the gas,” as proffered but, rather, limits the rate of airflow through container 10.

(4) McMillan and Hayes

As discussed the previously filed Amendment, *McMillan* teaches away from a rotating structure by varying a length of an exposed lamp with a complex and cumbersome telescoping structure.

Hayes also teaches away from what is claimed, as the *Hayes* device would be rendered unsatisfactory by the proposed modification (rotatable cylinder) for its intended purpose of providing a light that is moved to expose different portions of a circuit board for subsequent etching of a pattern (device controls emission through unique portions of a single slit using independently operable gates). In re Gordon, *supra*.

Impermissible Hindsight - Picking & Choosing

Respectfully, it appears that the Examiner has engaged in improper hindsight analysis and has selected parts of the respective individual references without consideration of the invention as a whole. See In re Wesslau, 147 USPQ 391, 393 (CCPA 1965)(“impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation

of what such reference fairly suggests to one skilled in the art”). There is nothing in any of the applied references, alone or in combination, that teaches or suggests what is claimed, and it is respectfully submitted that the Examiner’s statements are unsupported by any reasoning other than that gleaned from Applicant’s disclosure. In particular, since the various references teach away, the statements of alleged motivation are inapposite.

Further, the statements of alleged motivation amount to impermissible hindsight because they are overbroad, ignore the teachings away of the applied references, and ignore the solutions to long-felt needs provided by the claimed structure.

- Claims 71, 74-77, 80-81, 85, 88, 93-94, and 96 stand rejected under 35 U.S.C. § 103(a), as being obvious over *Nelson* (U.S. Appln. Publ. No. 20020098109) in view of in view of *Hayes* and further in view of *Meek*. Applicant respectfully traverses this rejection.

Nelson is typical of prior art structures that attempt to “match” the amount of ozone being produced in a target area by simply “using different length UV bulbs having corresponding different UV output amounts. Such does not allow a user to adjust the amount of ozone.” (i.e., Applicant’s Publ. Appln, at ¶0079)).

The *Nelson* structure has a defined target area (“ozone chamber”) and target ozone concentration (“desired concentration”) and uses “end-caps of various configurations . . . to regulate emission of ozone-generating radiation and control production of ozone” within this closed chamber (i.e., ¶0022). The *Nelson* device controls emission of ozone-generating radiation by defining the dimensions of windows 174 in end-cap 72 and increases ozone exposure time of air by lowering airflow velocity in the ozone chamber (e.g., ¶0016). Ozone is then removed from the air (e.g., by a germicidal lamp) before the air is returned to the environment (e.g., ¶0023), because *Nelson* is primarily concerned with health risks associated with exposing people and/or animals to ozone (e.g., ¶0005).

By comparison, the claimed structure allows a user to adjust the ozone level in a room, for example when people are absent during the day or when an ozone lamp has a radiation output that diminishes over time or that is different from a previous lamp. The subject invention,

therefore, allows for user adjustment rather than employing a fixed, designed, target amount of radiation, as in *Nelson*.

Applicant respectfully submits that the ground of rejection (1) does not consider the claimed invention as a whole, (2) includes erroneous findings of fact, (3) does not consider the teachings away of the applied references, and (4) does not consider common sense.

(1) Invention as a Whole

When making the obviousness determination, the trier must view all the relevant prior art in view of the claims as a whole. 35 U.S.C. § 103. When a party claims that a combination of references renders a patented invention obvious, the prior art must provide a suggestion or motivation to combine the references. See Heidelberger Druckmaschinen AG v. Hantscho Comm. Prods., Inc., 30 USPQ2d 1377, 1379 (Fed. Cir. 1994); Northern Telecom Inc. v. Datapoint Corp., 908 F.2d 931, 934 (Fed. Cir. 1990). Absent this suggestion or motivation, the mere existence of the individual elements at the time of invention does not render a patented combination of these elements obvious as a matter of law. The claimed invention as a whole must be considered and prior art must also be considered as a whole, including portions that would lead away from the claimed invention. See W.L. Gore & Assoc. v. Garlock, 220 USPQ 303 (Fed. Cir. 1983), *cert. den.* 469 U.S. 851 (1984).). “The issue [] is whether the teachings of the prior art would, in and of themselves and without the benefit of appellant’s disclosure, make the invention, as a whole, obvious.” In re Nomiya, at 612, quoting In re Sponnoble, 160 USPQ 237, 243 (CCPA 1969)(emphasis in original), additional citations omitted. Such considerations render the claimed structure nonobvious.

Specifically, the ground of rejection does not teach or suggest any motivation to have combined the reference structures as is claimed, other than by use of impermissible hindsight. See Hodosh v. Block Drug Co., Inc., 229 USPQ 182, 187 n.5 (Fed. Cir. 1986), In re Vaeck, 20 USPQ2d 1438 (Fed. Cir. 1991). In our case, the prior art in the field of ozone-producing air purifiers simply does not contain any suggestion of the subject invention, and there would have been no suggestion or motivation in the prior art to have modified the *Nelson* structure because,

as discussed herein, the *Nelson* disclosure teaches away, various findings of fact are in error, and because of a common sense reading of each reference and claim as a whole.

(2) Findings of Fact

► The present rejection (i.e., Action, at ¶12) states that *Nelson* discloses a “second cylinder (178).” Applicant respectfully disagrees because the claimed second cylinder is rotatably disposed, has a window, and is structured so that a UV lamp is within both the first and second cylinders and so that the first and second windows overlap. Instead, *Nelson* discloses a germicidal end-cap 178 that is unrelated to what is claimed. Specifically, Applicant respectfully submits that the citation of germicidal end-cap 178 is misleading at best because the function of this *Nelson* element is to secure the end of a germicidal section 14, such as for securing the radiation source within a cartridge (e.g., ¶¶0075, 0104).

► The present rejection states, “*Nelson* does not appear to specifically teach that there is a second cylinder which is rotatably disposed, having a second cylinder sidewall, nor that a first cylinder and second cylinder are coaxially/concentrically disposed about the longitudinal axis, nor that the rotation of the second cylinder changes an amount of overlap of the first and second windows, or that at least one of the windows is a tapered slot. *As to the limitation that only one window/opening slot is located in the cylinders . . .*” *Id.* Applicant respectfully submits that the first quoted sentence amounts to an admission that the *Nelson* structure, even when greatly modified, fails to disclose all the claim limitations. The KSR Court stated, “The TSM test captures a helpful insight: A patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art.” KSR, *supra*. The just-quoted sentence reaffirms the so-called “all elements rule” (All words in a claim must be considered in judging the patentability of that claim against the prior art.) In re Wilson, 424 F.2d 1382, 1385 (CCPA 1970). The italicized just-quoted sentence from the present Action illustrates that the ground of rejection fails to consider the exact claim language including all limitations because there is no limitation that “only one window/opening slot is located in the cylinders.”

► The present rejection states, “It would have been obvious to one of ordinary skill in the art . . . to provide a single slot in the first cylinder of *Nelson* as a known alternate shape of opening in order to block/permit the passage of light radiation beyond the slot so as to limit the amount of light radiation being passed through as shown by Hayes.” Applicant respectfully submits that the number of slots in the cap 72 of *Nelson* is not relevant in any way to what is claimed, and is especially not related to the claimed second cylinder and its relation to other claimed limitations.

(3) Teaching Away

The ground of rejection (i.e., Action, at page 14, second paragraph) proffers a statement of alleged motivation that is inapposite because the three applied references each teach away from the proposed modification. The “second cylinder” of *Nelson* cannot be modified because, as discussed above, it is disposed at an opposite end of a lamp at a germicidal section and has a function of securing the germicidal portion. Therefore, *Nelson* teaches away because such modification would render the *Nelson* structure unsatisfactory for its intended securing operation. In re Gordon, supra. In addition, the disclosure at ¶0078 of *Nelson* is similar to the *McMillan, Jr.* reference disclosure that teaches away by covering a length of an ozone section. See prior Amendment for further discussion of this teaching away of *McMillan, Jr.*

(4) Common Sense

Applicant respectfully submits that the ground of rejection (i.e., Action, at page 14, second paragraph) asks the reader to pick and choose some of the claim limitations from unrelated references while neglecting to consider the claimed invention or applied references as a whole, while relying on unsupported findings of fact, and while neglecting to consider all claim limitations (e.g., claim 88, last clause). In addition, there is no TSM to have modified the applied references and, although KSR has expanded the TSM test to include common sense, the present rejections fail to identify supportable common sense reasoning. Further, there is no support shown for characterizing the *Meek* reference as applicable to anything other than

diffusing a volatilizable substance into an environment, and such is unrelated to what is claimed because radiation is not a volatilizable vapor.

For at least these reasons, Applicant respectfully requests the rejection of claims 71, 74, 77, 80-83, 85, 88, 93-94, and 96 be withdrawn.

- Claims 72-73, 78-79, 86-87, 89-92, and 95 stand rejected under 35 U.S.C. § 103(a), as being obvious over *Botcharoff* in view of *Meek*, further in view of *McMillan, Jr.*, still further in view of *Hayes* or *Nelson*, yet further in view of *Hayes* and *Meek* as those references were applied to the above-identified rejection of claims 71, 77, 85, and 88, additionally further in view of *Saeki* (JP 09-169503) and even further in view of *Bulsink* (U.S. Patent No. 6,514,467).

Applicant respectfully traverses this rejection.

Applicant respectfully submits that the applied references teach away from the claimed structure, for reasons discussed above and in previous responses in the case. In addition, the findings of fact rely heavily on disparate disclosures in the several references (“picking and choosing”) even though such references have already been shown in previous Amendments as teaching away from the claimed combination (e.g., *McMillan, Jr.*, *Hayes*, *Nelson*, *Saeki*, *Bulsink*). For these reasons, the Examiner’s statement of alleged motivation is inapposite. The new combination does not cure the deficiencies of the primary reference *Botcharoff*.

Respectfully, it appears that the Examiner has engaged in improper hindsight analysis and has selected parts of the respective individual references without consideration of the invention as a whole. See *In re Wesslau*, 147 USPQ 391, 393 (CCPA 1965) (“impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art”). There is nothing in any of the applied references, alone or in combination, that teaches or suggests what is claimed, and it is respectfully submitted that the Examiner’s statements are unsupported by any reasoning other than that gleaned from Applicant’s disclosure.

Further, the large number of references is further evidence of the nonobviousness of the claimed structure. The seminal case is In re Gorman, 933 F.2d 982 (Fed. Cir. 1991), where 13 references were combined to show obviousness. That holding was due to the fact that the references were not substantially modified in the claimed combination. That court stated that a patent examiner is not allowed to do “hindsight reconstruction of the claimed invention, using applicant’s structure as template and selecting elements to fill gaps . . . [except when] evidence that various elements of the claimed invention were shown in cited references in various subcombinations, used in the same way, for the same purpose as in the claimed invention.”

In our case, the present ground of rejection depends on 9 references. As has already been discussed, the present grounds of rejection amount to hindsight because the cited prior art does not show “elements [] being used in exactly the same way and for the exactly the same purpose as in the claimed invention.” Therefore, the large number of references weighs against the ground of rejection.

In an analogous way, the KSR Court considered the applied prior art in that case as “an obvious example of an adjustable pedal with a fixed pivot point, and [] prior art [] replete with patents indicating that such a point was an ideal mount for a sensor.” That cited prior art, therefore, showed “elements [] being used in exactly the same way and for the exactly the same purpose as in the claimed invention.”

For at least these reasons, Applicant respectfully requests the rejection of claims 72-73, 78-79, 86-87, 89-92, and 95 be withdrawn.

- Claims 82-84 stand rejected under 35 U.S.C. § 103(a), as being obvious over *Nelson* in view of in view of *Hayes*, further in view of *Meek*, and still further in view of *Bulsink*. Applicant respectfully submits that the rejection is rendered moot by the present claim amendments.
- Claim 84 stands rejected under 35 U.S.C. § 103(a), as being obvious over *Botcharoff* in view of *Meek*, further in view of *McMillan, Jr.*, still further in view of *Hayes* or *Nelson*, yet

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further in view of *Hayes*, *Meek*, and *Bulsink* as those references were applied to the above-identified rejection of claim 82, and even further in view of *Disabito* (U.S. Patent No. 6,809,326). Applicant respectfully submits that the rejection is rendered moot by the present claim amendments.

Support for Newly Added Claims

Newly added claims 97-111 are believed to be fully supported by the originally filed application.

Conclusion

For the stated reasons, Applicant believes the application should be passed to issue.

The Examiner is kindly requested to call the undersigned at the telephone number listed below if the application is not passed to issue, to discuss any remaining issues.

A fee for a two-month extension of time is concurrently submitted. No additional fee for any extensions of time are believed to be due. However, to the extent that a further request for extension of time is due, a Request for Extension of Time is respectfully requested for an appropriate amount of time, and the Commissioner is authorized to charge any such fees.

Respectfully submitted,



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Date: **January 20, 2009**